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SUBJECT: SOUTH AFRICA: MINERALS AND ENERGY NEWSLETTER "THE ASSAY" --
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This cable is not for Internet distribution.

11. (U) Introduction: The purpose of this monthly newsletter, initiated in January 2004, is to highlight minerals and energy developments in South Africa. This includes trade and investment as well as supply. South Africa hosts world-class deposits of gold, diamonds, platinum group metals, chromium, zinc, titanium, vanadium, iron, manganese, antimony, vermiculite, zircon, alumino-silicates, fluorspar and phosphate rock, and is a major exporter of steam coal. South Africa is also a leading producer and exporter of ferroalloys of chromium, vanadium, and manganese. The information contained in the newsletters is based on public sources and does not reflect the views of the United States Government. End introduction.

Key

12. (U) Key to some of the terminology and abbreviations used is given to facilitate understanding.

BEE (Black Economic Empowerment) - the scheme whereby the South African Government promotes black participation in business.

t = tons,
t/d = tons per day,
c/l = cents per liter,
t/m = tons per month,
t/y = tons per year,
oz = troy ounces (31.1 grams),
cmg = centimeter grams,
mcf = million cubic feet,
tcf = trillion cubic feet,
R = SA currency (rand),
MW = megawatts,
kt = thousand tons,
bbl/d = barrels per day,
MW = megawatts,
PGM = platinum group metals.

HOT NEWS

The Inconvenient Truth about SA Electricity Supply

13. (U) On January 18, South Africa was hit by widespread power failures that affected five provinces. Although these were cleared by the weekend, their occurrence has given rise to concerns about the adequacy of electricity supply over the next few years and the likely impact this could have on critical operations and future investment in energy-intensive industries. South Africa generates some 50% of the continent's electricity

and is heavily reliant on power to drive its energy-intensive economy, including mines, smelters, refineries, and factories. According to the spokesman for the state-owned utility Eskom, in addition to plants closed for routine maintenance, six stations failed, including one unit at the Koeberg nuclear power facility. As a consequence, about 9,500 MW of Eskom's 36,800 MW of generating capacity was not available during the power failure. Of that, 4,900 MW was unplanned and the rest was closed for maintenance.

¶4. (U) The cause of the failure is thought to be the automatic shutdown of the Koeberg unit (900 MW), which overloaded a system already experiencing unplanned and planned outages. Other fingers point to poor government and management planning, a shortage of skilled technical staff, and coal delivery problems. An investigation into the cause of the outages should reveal the truth, in time. Whatever the reason, South Africa is in for a difficult power supply period until major new capacity comes on line in 2008. The inconvenient truth is that while the international norm for spare generation capacity is 10%-15%, South Africa's spare capacity is well below 10% and some authorities believe it to be as low as 2%, leaving little margin for unplanned supply cuts.

¶5. (U) In the mid-1990's, the newly elected SAG put a freeze on Eskom's power plant construction, in the name of privatization. Since then numerous energy experts, including Eskom itself, predicted that the country was heading for a power crunch unless the government rapidly facilitated the building of new capacity. The SAG vacillated for nearly eight years, believing that the private sector would get in line to build new capacity. This did not materialize.

¶6. (U) By 2004, it was clear that growth in electricity demand far exceeded government projections as a result of the country's strong economic growth and that by about 2007 peak demand would exceed supply capacity. At that point the then Minister of Trade and Industry, Alec Erwin, rescinded the freeze and once

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again mandated Eskom as South Africa's major supplier of electricity. It was also decided that Eskom would remain in State hands and that it would resume the role of the country's foremost energy provider. In order to continue to engage the private sector, they were asked to take responsibility for building 30% of new capacity with Eskom responsible for the remaining 70%. Government has budgeted \$14 billion to upgrade generation capacity by 8,000 MW over the next five years, with first new power due in 2007-8. Until then South Africa seems set for a winter of planned load shedding.

Domestic Steel Sales Set New Records

¶7. (U) South Africa's five carbon steel producers dispatched 5.337 million tons of primary carbon steel products to the domestic market during 2006. This was the highest total on record and is 26 % higher than the 4.230 million tons delivered in 2005. During the same 12 month period, 2.351 million tons were exported. This was 30.8% less than the 3.397 million tons exported in 2005. In 2006, total sales increased marginally by 0.8% to 7.688 million tons.

¶8. (U) During 2006, imports of primary steel products into SA increased to 456,000 tons for the first ten months giving an annualized figure of 540,000 tons for the full year. This represents an increase of more than 60% over the 336,000 tons for 2005 and is the highest level of imports for 30 years. Based on projections, domestic consumption of steel should total about 5.8 million tons for 2006. This is an increase of 27% over the 4.56 million tons consumed in 2005 and 10% higher than the previous record of 5.27 million tons in 1981. The record demand for steel, cement and other construction materials is indicative of the economic and construction boom that the country is experiencing.

PLATINUM GROUP

Platinum Group Metal Ruthenium is up 1658% since 1999

¶9. (U) A recent report by PGM analyst Anthony Lipmann, reviewed the price movements of the top ten metals between April 1, 1999 and January 15, 2007. Of the PGMs, Ruthenium was the best performing metal with a price rise of nearly 1660% and worst performing was palladium. The performance of the other PGM-associated metals is given below for interest. Not to be outdone by these 'exotics', many industrial commodities and their ores also performed well, including copper, lead, zinc, tin, steel and iron ore, nickel, chromium, cement and a number of others.

¶10. (U) The overall increase in the price of most commodities clearly shows the general strength of the world economy, driven by China with a year-on-year growth rate of more than 10% and followed, to a lesser extent, by India. China is responsible for more than 50% of the increased demand for copper and a number of other metals. The figures below show prices of some commodities as of January 15, 2007, and their percentage increases over prices on April 1, 1999:

Rhodium \$185,666 per kg - up 600%
Platinum \$36,940 per kg - up 220%
Ruthenium \$21,540 per kg - up 1660%
Gold \$20,184 per kg - up 125%
Iridium \$12,699 per kg - up 2.5%
Osmium \$12,217 per kg - down 5%
Palladium \$10,673 per kg - down 8.5%
Rhenium \$5500 per kg - up 292%
Copper \$2.54 per lb - up 274%

----- COMPANIES -----

Exxaro - a Major New Mining Company is Born

¶11. (U) Exxaro, the black-empowered JSE-listed mining company, was formed when Kumba Resources, 67% owned by Anglo American, was split onto Kumba Iron Ore and Exxaro Resources. Anglo retained its majority holding in Kumba, which owns the huge Sishen iron ore mine, one of the top ten such deposits in the world. Exxaro was set up as a BEE-owned company to hold all non-iron ore assets, including coal, and immediately merged with another BEE coal producer, Eyesizwe Coal, to create the biggest coal producer in South Africa. Anglo also gave Exxaro the option of taking over some of its other so-called non-core assets, which they are in the process of exercising. These include Anglo's mineral sands operation Namakwa Sands and a 26% stake in its zinc and lead operation Black Mountain. This will position Exxaro as one of the world's largest suppliers of titanium dioxide feedstock and zircon and strengthen its

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position in the South African zinc market. Exxaro will pay \$300 million in cash for the Namakwa plant and mine and \$30 million in cash for the stake in Black Mountain, which includes the Gamsberg project - one of the world's largest undeveloped low grade zinc deposits.

De Beers Cutting Technical Diamond Capabilities in South Africa -----

¶12. (U) De Beers is about to retrench 200 staff from its head office of 800 people, affecting many of the most experienced technical and exploration staff. This is the third round of cuts over the past two years and is specifically aimed at De Beers Consolidated Mines (DBCM) which houses the group's South African mines. The layoffs will also affect the separate De Beers Group operation that services its international operations.

¶13. (U) De Beers' posture in South Africa has changed substantially over the past five years. Five out of seven of its mines are considered to be non-profitable - depending on who

is making the evaluation. The new SAG has from the very start viewed De Beers with suspicion and much of the new legislation and government rhetoric against the white-controlled mining industry has been directed at De Beers. The draft royalty, beneficiation and diamond bills have all singled out diamonds for special treatment and higher tariffs and levies based on assumptions that South Africa is competitive with India and China in diamond cutting and jewelry manufacturing despite higher local wage rates and lack of capacity.

¶14. (U) De Beers' new CEO Gareth Penny, appointed in February from the Diamond Trading Company (DTC), has developed a different business model for De Beers, which relies on purchasing technical skills rather than developing technology inhouse. His background is in marketing. He is in the process of driving an aggressive process to retrench technical and scientific staff. As a consequence, De Beers is not a 'happy place' to be currently employed.

¶15. (U) De Beers Diamond Company began life by consolidating the fabulously rich diamondiferous kimberlitic pipes in Kimberley, South Africa. They developed technologies for exploiting these discoveries and conducted extensive research and exploration work into finding and exploiting alluvial and marine deposits. Until the mid-1990's, De Beers acted as custodian, promoter and chief nurturer of the global industry, using monopolistic practices to maintain the price of diamonds. This enabled the industry in Africa to grow and prosper. Unfortunately, this also gave rise to some less beneficial side effects including 'conflict diamonds'.

¶16. (U) De Beers also established partnerships with world-class research groups to develop synthetic industrial diamonds and to understand and develop the science of the genesis of diamonds. Progress in this latter venture opened the world to diamond exploration and contributed to finds in Canada and elsewhere. De Beers have been more than simply a producer of diamonds. They have developed new technologies and skills that have wider applications in medicine and other disciplines and this has been of considerable benefit to host countries. Their greatest strength has been its great depth of in-house technical diamond mining, processing and exploration expertise. This is apparently changing under the new leadership.

South Africa's Minerals

¶17. (U) The following are some of the major minerals produced in South Africa, according to the South African Council for Geoscience

Platinum Group Minerals (PGMs)

¶18. (U) South Africa hosts the Bushveld Complex (BC), the world's largest basic igneous intrusion covering an area of some 65,000 square kilometers. It is a veritable treasure chest of minerals, the best known being the platinum group minerals (PGM): platinum, palladium, rhodium, ruthenium, osmium and iridium. South Africa is the world's major producer of PGMs and possesses over 87% of the known reserves. In 2005, the total sales value was \$6 billion. The major use of PGMs is in catalytic converters, used in most modern cars to ensure that they meet increasingly stringent emissions control legislation. The Merensky Reef has produced the bulk of the world's platinum to date, although other important reefs, namely the UG2 - Upper Group chromitite seam number 2 - and the Platreef will become increasingly important as new mines are developed on the eastern and northern limbs of the BC, respectively.

Coal

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¶19. (U) Coal represents a reliable and abundant source of affordable energy and is fundamental to the development of the South African economy. The country possesses the seventh

largest resource-base in the world and coal has contributed significantly to South Africa's industrial and economic development. In addition to being used for energy production, coal is vital in the metallurgical industry where it is used to reduce iron ore to steel and steel alloys. South Africa is a world leader in the production of liquid fuels and chemicals from coal and Sasol produces some 30% of the country's liquid fuel needs. Sasol also markets its coal-to-liquid (CTL) and gas-to-liquid (GTL) technology world-wide. In 2005, the total sales value of coal was \$5.6 billion, of which 69 million tons were exported, 112 million tons went to generate electricity, 45 million tons was converted to liquid fuel, and 20 million tons went to the domestic market.

Gold

¶20. (U) Gold mining in South Africa began in 1871, in the Eesteling goldfield in the Limpopo Province. Subsequent exploration revealed several other goldfields, the most important of which were Barberton, Sabie, and Pilgrim's Rest, all located in Mpumalanga Province. These fields yielded over 18 million ounces (560 tons) of gold. In 1886, the fabulous Witwatersrand goldfield was discovered, which transformed the South African gold mining industry into the world leader, a position it still holds today. The Witwatersrand is by far the largest known goldfield on earth, and has produced more than 1.5 billion ounces (46,650 tons) of gold. Its remaining resources amount to more than one billion ounces. Although production is declining, total sales in 2005 were worth \$4.2 billion.

Diamonds

¶21. (U) The name diamond derives from the Greek word meaning invincible and refers to the minerals extreme hardness and resistance to acids and alkalis. Diamonds were discovered in South Africa in 1866 and thereafter the country totally dominated world production until 1930. The country has remained a smaller but significant producer and in 2005, it produced 15.7 million carats worth \$1.7 billion. This made it the world's fifth biggest producer by weight and fourth by value. It was in South Africa that diamonds were first found in their primary deposits, namely in kimberlite pipes (volcanic) and fissures and South Africa is the only country where diamonds are mined from primary and secondary alluvial and marine deposits.

COFFMAN